Interface Descriptions of Distribute State Data with other CCS subsystems and SYM functions.

Interface with FEP

Source	Level 2 Destination	Level 3 Source/Dest	Level 2 Interface (Data Flow Name)	Level 3 Interface (Data Flow Name)	Description	Interface Elements	Mode
FEP	DSD	SYM_InputStateData	G_ProcessedTelem	G_ProcessedTelem	Real-Time HST, SMS Data	For details, see the FEP Output Format (FOF) Document on the CCS WWW homepage.	Real-Time, External Simulation

Interface with CMD

Source	Level 2 Destination	Level 3 Source/Dest	Level 2 Interface (Data Flow Name)	Level 3 Interface (Data Flow Name)	Description	Interface Elements	Mode
CMD	DSD	SYM_InputStateData	G_StateChangeInfo	G_StateChangeInfo	Commands (pre-planned and real-time) spacecraft events, and other schedule information as required by subscribing recipients. This includes notification of such events as ZOE's, Day/Night transitions, Occlusions, etc.		Real-Time, External Simulation

Interface with DTF

Source	Level 2 Destination	Level 3 Source/Dest	Level 2 Interface (Data Flow Name)	Level 3 Interface (Data Flow Name)	Description	Interface Elements	Mode
DTF	DSD	SYM_InputStateData	SYM_DtfStateUpdate	SYM_DtfStateUpdate	State update information including Expected States, True State Deltas, Derived Parameter Values, etc.		All

Interface with CNT

Source	Level 2 Destination	Level 3 Source/Dest	Level 2 Interface (Data Flow Name)	Level 3 Interface (Data Flow Name)	Description	Interface Elements	Mode
CNT	DSD	SYM_InputStateData	SYM_CntReplayTlm	SYM_CntReplayTlm	Historical Telemetry from DMG archive, replayed by CNT	For details, see the Common Data Format (CDF) on the CCS WWW homepage.	Automatic Replay User Requested Replay
CNT	DSD	SYM_InputStateData	SYM_CntReplayState ChangeInfo	SYM_CntReplayState ChangeInfo	Historical Schedule Info and Commands from DMG archive (HICS), replayed by CNT. See CMD-DSD interface G_StateChangeInfo for additional information.		Automatic Replay User Requested Replay

Interface with EVT

Source	Level 2 Destination	Level 3 Source/Dest	Level 2 Interface (Data Flow Name)	Level 3 Interface (Data Flow Name)	Description	Interface Elements	Mode
EVT	DSD	SYM_InputStateData	SYM_EvtDsdFilteredEvent	SYM_EvtDsdFilteredEvent	To include: S/N True State Events, ...	For Details, see the corresponding interface description for ManageEvents	All
DSD	EVT	SYM_InputStateData	SYM_DsdEvent	SYM_IsdEvent	Failures or significant events to be archived.	For Details, see the corresponding interface description for ManageEvents	All
DSD	EVT	SYM_InputStateData	SYM_DsdEvent	SYM_MsrEvent	Failures or significant events to be archived.	For Details, see the corresponding interface description for ManageEvents	All

State Data Request Interface

Source	Level 2 Destination	Level 3 Source/Dest	Level 2 Interface (Data Flow Name)	Level 3 Interface (Data Flow Name)	Description	Interface Elements	Mode
CMD	DSD	SYM_ManageState DataRequest	G_StateDataRequest	G_StateDataRequest	State ID will be the Mnemonic ID for FEP Telemetry and will be assigned for other types of States. May request state data one time only - value returned immediately. May subscribe for regular updates - will receive acknowledgment immediately and then data updates as specified. If a subscription exists for a state, and a new subscription is sent, the new subscription will replace the existing one. States may be unsubscribed individually, or all of the requestor's existing subscriptions may be cleared. It will also be possible to get a report (flat file with format TBD) on existing subscriptions. See State Data Request/Response Straw-person Design - out on 11/15/96 - for details.	Requestor Data Middleware TBD Rqst Type (3 bits) • 1 = Nth Sample • 2 = Every N Seconds • 3 = Changes Only • 4 = One Time Only • 5 = Unsubscribe • 6 = Clear all existing subscriptions • 7 = Report existing Subscriptions Sample Rate (int) Value required for Rqst Type option 1 or 2 No. of States (int) State ID List	Real-Time, External Simulation
GUI	DSD	SYM_ManageState DataRequest	G_GUI_StateData Request	G_GUI_StateData Request	See Above	See Above	All
DTF	DSD	SYM_ManageState DataRequest	SYM_DtfStateData Request	SYM_DtfStateData Request	See Above	See Above	All
REF	DSD	SYM_ManageState DataRequest	SYM_RefStateData Request	SYM_RefStateData Request	See Above	See Above	All
MMD	DSD	SYM_ManageState DataRequest	SYM_MmdStateDataR equest	SYM_MmdStateDataR equest	See Above	See Above	All

State Data Response Interface

Source	Level 2 Destination	Level 3 Source/Dest	Level 2 Interface (Data Flow Name)	Level 3 Interface (Data Flow Name)	Description	Interface Elements	Mode
DSD	CMD	SYM_ManageState DataRequest	G_StateDataResponse	G_StateDataResponse	Acknowledge request. State ID will be the Mnemonic ID for FEP Telemetry and will be assigned for other types of States. If request is for one time only data, return the data. For subscriptions, data updates will be provided as specified until subscription is canceled.. For Subscription Report, Subscription List will be provided. See State Data Request/Response Straw-person Design - out on 11/15/96 - for details.	**For a State Data Response:** Rqst Status (2 bits) • 0 = Successful and Complete • 1 = Successful but not all data available • 2 = Error No. of State Element Records (int) State Data Element Records: State ID (int) State Data Status (int) True State Data (structure) Expected State Data (structure) Compare Status (structure) **For a Subscription Report Response:** Rqst Status (1 bit) • 0 = Successful • 1 = Error No. of State Subscription Records State Subscription Records: State Subscription Type (int) Sample Rate (int)	Real-Time, External Simulation
DSD	GUI	SYM_ManageState DataRequest	G_GUI_StateData Response	G_GUI_StateData Response	See Above	See Above	All

DSD	DTF	SYM_ManageState DataRequest	SYM_DtfStateData Response	SYM_DtfStateData Response	See Above	See Above	All
DSD	REF	SYM_ManageState DataRequest	SYM_RefStateData Response	SYM_RefStateData Response	See Above	See Above	All
DSD	MMD	SYM_ManageState DataRequest	SYM_MmdStateDataR esponse	SYM_MmdStateDataR esponse	See Above	See Above	All